Appendix 4: Water and Wastewater Sector

Sector Description

The water sector consists of two basic, yet vital, components: water supply and wastewater collection and treatment. Although it can be broken down into two basic components, the sector is successful through a complete integration of people, facilities, and cyber-based controls. On the supply side, the primary focus of critical infrastructure protection efforts is the Region's public water systems. These utilities depend on reservoirs, dams, wells, and aquifers; as well as holding, filtration, cleaning, and treatment facilities, pumping stations, aqueducts, cooling systems, transmission pipelines, and other delivery mechanisms that provide for domestic and industrial applications, including firefighting. The wastewater industry's emphasis is on the municipal sanitary sewer system, including hundreds of miles of sewer lines. Wastewater utilities collect and treat sewage and process water from domestic, commercial, and industrial sources. The King County Wastewater Treatment Division operates the regional wastewater treatment system for 34 cities and sewer districts that serve 1.4 million customers. In large parts of Seattle the system is combined, mixing surface water and sanitary sewage in the same collection and treatment system.

Results of Infrastructure Interruptions

Interruption of water service can significantly impact public health, sanitation, business operations, and reduce the area's ability to fight structure fires and wild land fires. Degradation of water quality for consumption can pose a significant threat to the health and safety of the people of Region 6. Water quality can become degraded due to damage to the water treatment, filtration and distribution system or by the introduction of toxic substances to reservoirs or other water system facilities. Public safety can also be impacted by interruptions in water distribution services. Failures in wastewater treatment would primarily result in impacts on the environment, which could subsequently lead to negative effects on public health.

Region 6 Service Providers Active in CIP

- All King County Water Districts
- All King County Municipal Water Districts
- King County Department of Natural Resources Wastewater Treatment Division

Current Information Sharing Mechanisms

- Water Information Sharing and Analysis Center, (http://www.waterisac.org)
- U.S. Environmental Protection Agency, (http://www.epa.gov)
- American Water Works Association, (http://www.awwa.org)
- Water Environmental Federation, (http://www.wef.org)
- Washington Association of Sewer and Water Districts, (http://www.waswd.org)
- Pacific Northwest Economic Region (PNWER), (http://www.pnwer.org)
- NWWARN, (https://www.nwwarn.gov)

Common Vulnerability Assessment Tools

- Guide for Small Wastewater Systems, Protecting Your Community's Assets: A Guide for Small Wastewater Systems, West Virginia University Research Corporation, funded wholly or in part by the US EPA (2002). The Federal government retains an unrestricted right (license) to use and reproduce this document and to authorize others to do so for Federal government purposes.
- CARVER + Shock VAM, The CARVER + Shock methodology. CARVER was originally developed by the US Special Forces.
- HLS-CAM, HLS-CAM Criticality developed by the West Virginia National Guard based on the DTRA JSIVA model modified to the civilian sector along with the Florida Domestic Security Work Group Comprehensive Vulnerability Assessment.
- IAPVA, IAP VA methodology developed by the Joint Program Office – Special Technology Countermeasures.
- RAM Methodologies (-D, -T, -W), The RAM (Risk Assessment Methodology) family (RAM-D, RAM-T, RAM-W) are forms-based security risk-assessment methods, developed by Sandia National Laboratories (SNL).
- State Vulnerability Assessment Methodology, The State Vulnerability Assessment (VA) Methodology developed by Argonne National Laboratory for the Department of Homeland Security (DHS) (2003).
- SVA-Pro, developed by Dyadem International Ltd. (2003).
- SVA-SG for Medium Drinking Water Systems, developed by the Association of State Drinking Water Administrators and National Rural Water Association (2002).
- SVA-SG for Small Drinking Water Systems, developed by The Camdus Group, Inc. for the Association of State Drinking Water Administrators and National Rural Water Association (2002).
- Terrorism VSAT, Developed by the North Carolina Department of Agriculture and Consumer Services for the North Carolina agri-business community.
- VAF, prepared under contract for the Critical Infrastructure Assurance Office by KPMG Peat Marwick LLP (1998).
- VS & Site Assistance Visit Methodologies, developed by Argonne National Laboratory for DOE Office of Energy Assurance (OEA) and transferred to DHS.
- VSAT – Vulnerability Self Assessment Tool, developed by the Association of Metropolitan Sewerage Agencies, (AMSA) in collaboration with PA Consulting Group and SCIENTECH, Inc. The US EPA sponsored the development.
- Vulnerability Checklist for Wastewater Utilities, produced and published by AMSA and PA Consulting Group in collaboration with SCIENTECH, Inc. (2002).